

WHAT IS CLAIMED IS:

- 5 1. A method of treating a disorder comprising implanting stem cells, progeny thereof, or combinations thereof, into a gastrointestinal organ of a subject affected with the disorder.
2. The method of claim 1 wherein the implanted cells repopulate neurons, muscles, or other tissues.
- 10 3. The method of claim 1 wherein the cells provide a source of biological material for therapeutic treatment.
4. The method of claim 1 wherein the stem cells are selected from the group of multipotent, pluripotent, totipotent stem cells, and combinations thereof.
- 15 5. The method of claim 1 wherein the cells are neural stem cells.
- 20 6. The method of claim 5 wherein the cells thereof are derived from embryonic neural tissue, adult neural tissue, or combinations thereof.
7. The method of claim 1 wherein the gastrointestinal organ comprises a solid organ.
- 25 8. The method of claim 7 wherein the solid gastrointestinal organ is the liver, the gall bladder, or the pancreas.
9. The method of claim 1 wherein the gastrointestinal organ comprises a hollow organ.
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10. The method of claim 9 wherein the hollow gastrointestinal organ is the mouth, the esophagus, the stomach, or the bowels.
- 5 11. The method of claim 1 wherein implanting cells into a gastrointestinal organ of a subject comprises administering the cells locally.
- 10 12. The method of claim 11 wherein administering cells locally comprises injecting the cells into a wall of the gastrointestinal tract.
13. The method of claim 1 wherein implanting cells into a gastrointestinal tract comprises administering the cells systemically.
- 15 14. The method of claim 1 wherein the disorder comprises degenerative, immunologic/inflammatory, neoplastic, or idiopathic conditions of the gastrointestinal tract.
- 20 15. A method of treating a disorder comprising implanting stem cells, progeny thereof, or combinations thereof, into a gastrointestinal organ of a subject affected with the disorder wherein the gastrointestinal organ comprises a solid organ or a hollow organ.
- 25 16. A method of treating a disorder comprising implanting stem cells, progeny thereof, or combinations thereof, into a gastrointestinal organ of a subject affected with a disorder comprising degenerative, immunologic/inflammatory, neoplastic, or idiopathic conditions of the gastrointestinal tract, wherein the implanted cells repopulate neurons, muscles, or other tissues.
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17. A method of producing enhanced levels of insulin in a subject comprising implanting stem cells and/or progeny thereof into the pancreas of the subject.

5 18. The method of claim 17 wherein the stem cells are selected from the group of multipotent, pluripotent, totipotent stem cells, and combinations thereof.

19. The method of claim 17 wherein the cells are neural stem cells.

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20. The method of claim 17 wherein the cells thereof are derived from embryonic neural tissue, adult neural tissue, or combinations thereof.

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